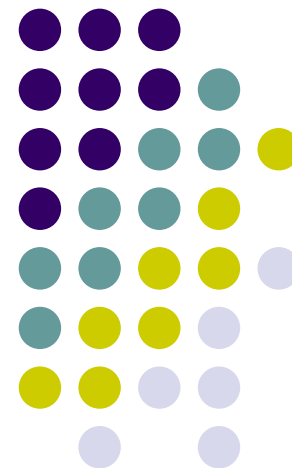
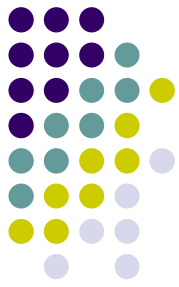


OpenURL: Linking LC's E-Resources

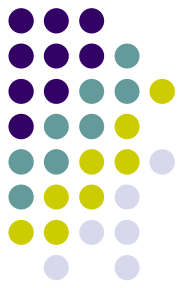
Ardie Bausenbach
Automated Planning and Liaison Office
Library of Congress
November 24, 2003



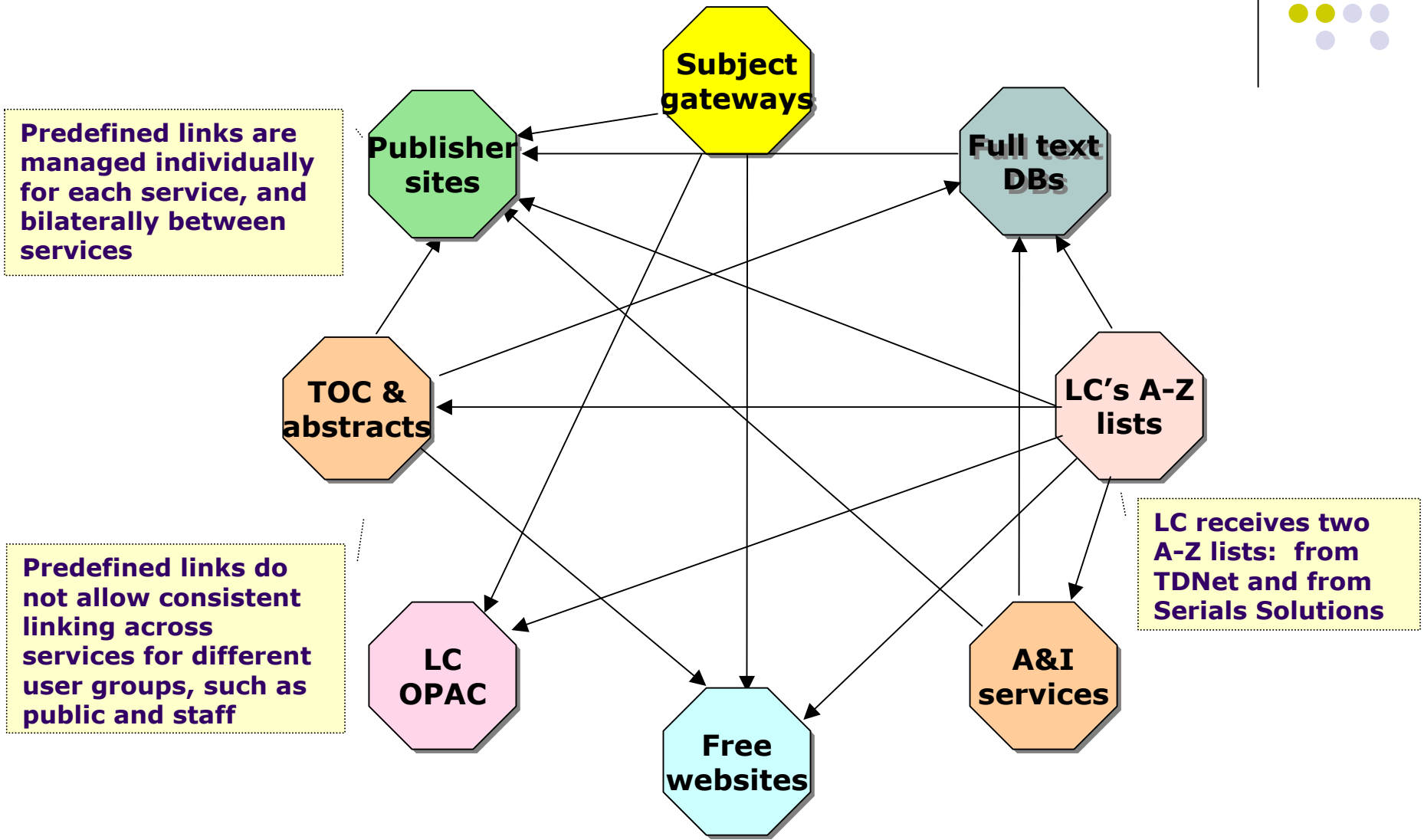
The Linking Problem



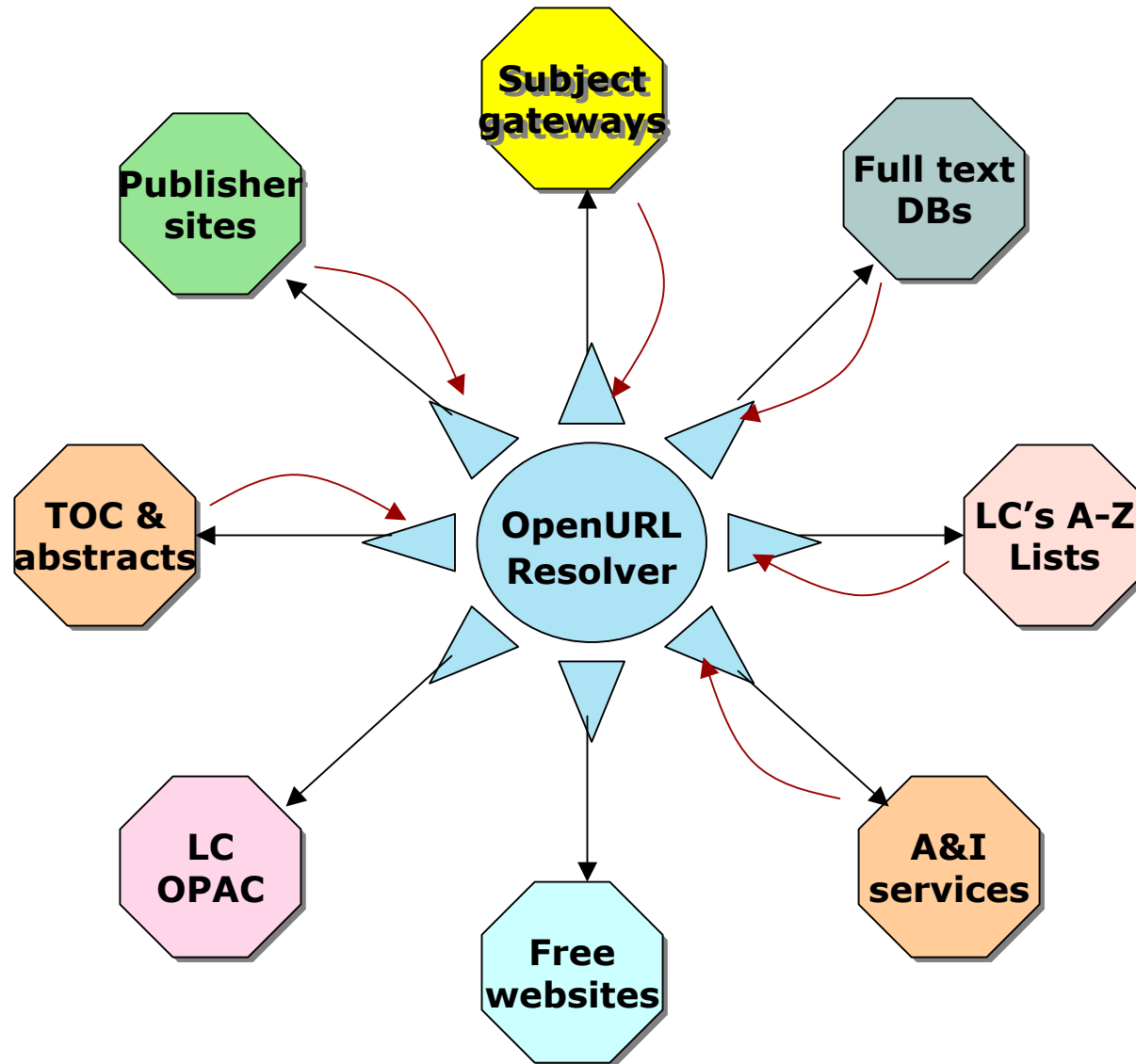
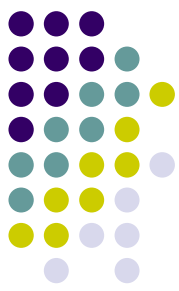
- LC acquires e-resources from many sources – aggregator services, memberships, free services
- Some services link LC users directly from citations to full-text. Others offer predefined links to selective resources.
- Many services only offer tables of contents or citations. To find full text, users must search LC's OPAC or A-Z lists to determine whether LC has access to the e-journal title with appropriate coverage dates.



Linking environment is inconsistent between resources and hard to manage.



An OpenURL resolver offers consistent links to services LC selects for specific user groups



A&I Service (HLAS) as Link Source



The image displays three overlapping screenshots of a web browser (Microsoft Internet Explorer) showing the HLAS service interface and the full-text article.

Left Screenshot (Link Source): Shows the HLAS service interface. The "Item 5 of 100" section displays the citation: "Kapelusz-Poppi, Anna María. Rural health and state construction in post-revolutionary Mexico: the Nicolaita Project for rural medical services. 0003-1615 (2001) 58:2;1-261". The "HLAS Volume: 62" and "HLAS Item#: 62003-1615" are highlighted. The "HLAS Editor/Code: Coerver" is also visible. The "Unverified In-Process Record" status is shown at the bottom.

Middle Screenshot (Services Menu): Shows the "Full-text available from Project Muse" section. The "year: 2001" and "volume: 58" are highlighted. The "To see if Princeton owns this item, check the Main Catalog" link is visible. Below this, there are links: "Report a problem or send comments about this record", "Learn more about PULinks/SFX", "Ask a librarian for assistance", and "Find a subject specialist".

Right Screenshot (Target Content Provider): Shows the full-text article titled "Rural Health and State Construction in Post-Revolutionary Mexico: The Nicolaita Project for Rural Medical Services" by Ana María Kapelusz-Poppi. The article is published in "The Americas" 58.2 (2001) 261-283. The article is accessed via the Library of Congress. The article text begins with "In the nineteen twenties a group of graduates from the Colegio de San Nicolás and the Universidad Michoacana in Morelia, the capital city of the state of Michoacán, drafted a program for the economic and social development of the state of Michoacán."

Link Source

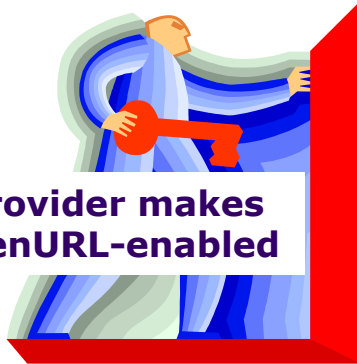
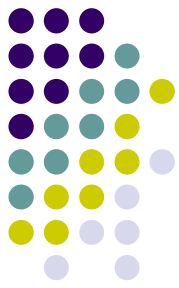


Services
Menu



Target
Content Provider

OpenURL: How Does It Work?



Service Provider makes source OpenURL-enabled

OpenURL link is now available to users

User clicks OpenURL link



Source uses an OpenURL to send citation metadata and context information to resolver

Author: Kapelusz-Poppi, Anna María
Title: Rural health and state construction in post-revolutionary Mexico
Journal: The Americas
ISSN: 0003-1615
Date: 2001
Volume: 58
Issue:
Page:

http://sfx.princeton.edu:90
HLAS&genre=article&issn=0003-1615
+A+Quarterly+Review+of+Inter-American
History&volume=58&pages=261-270
2001&aulast=Kapelusz-Poppi&auinit=A
state+construction

Services Menu Presented to Users

A&I services

TOC & abstracts

Full text DBs

Article

LC OPAC

LC's A-Z Lists

Google search

Free websites

OpenURL Resolver

LC's resolver determines what copy of full text LC users can access

What is an OpenURL?



- Transports metadata and/or unique identifiers for a requested resource, along with context information about the requestor, using a standard syntax. OpenURL (currently version 0.1) is in the process of becoming a NISO standard: OpenURL 1.0.
- Predetermines what metadata elements will be sent to the OpenURL resolver
- Relies at this time on the HTTP protocol for transmission. OpenURLs are “actionable URLs.”

What is an OpenURL?



An OpenURL contains:

- The **address of the OpenURL resolver** to which the OpenURL is going to be sent
- Sufficient **information about the requested resource** to allow the OpenURL resolver to match the metadata in the OpenURL to web services selected by the Library



OpenURL 0.1

Article metadata is tagged using a predetermined element set.

Genre metadata is added from a fixed list of terms used in OpenURLs.

Context-sensitive metadata about the source of the citation is added.

genre=article&
title=Americas%3a+A+Quarterly+Review+of+Inter-American+Cultural+History&
issn=0003-1615&
date=2001&
volume=58&
issue=2&
pages=261-283&
aulast=Kapelusz-Poppi&
atitle=Rural+health+and+state+construction+in+post-revolutionary+Mexico%3a&
sid=LC:HLAS

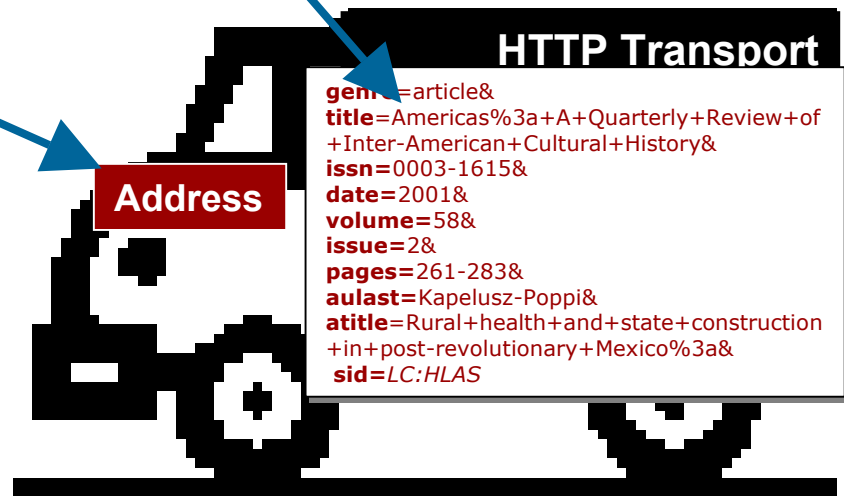
http://resolver.loc.gov/loc.cgi?

Add the address and the OpenURL is ready to be sent.

Address

HTTP Transport

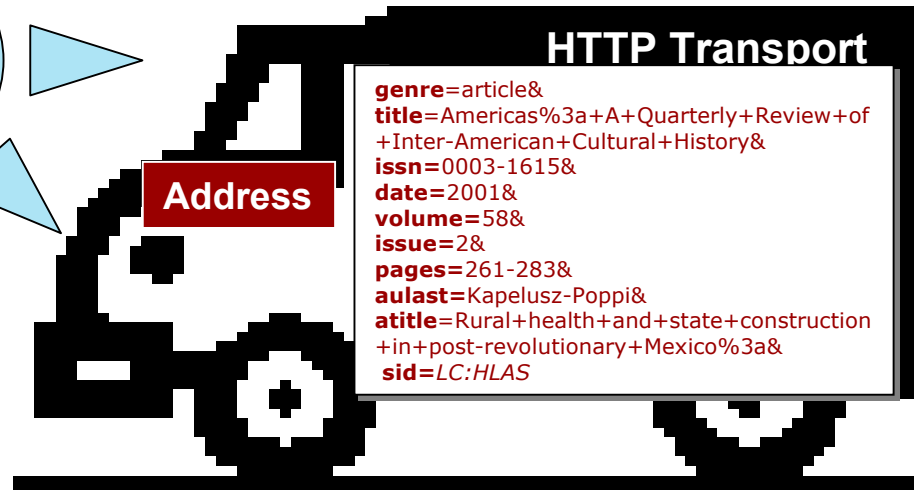
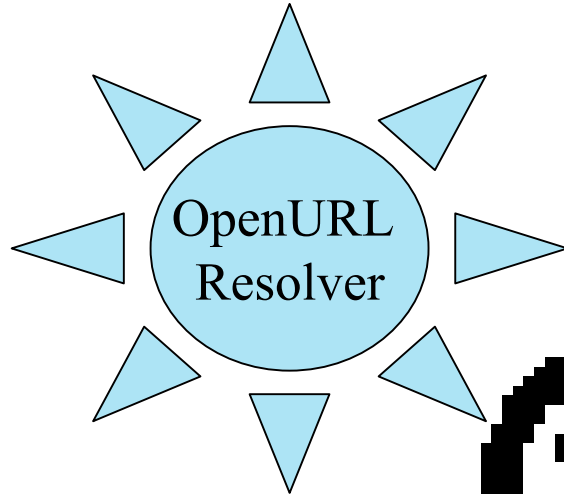
genre=article&
title=Americas%3a+A+Quarterly+Review+of+Inter-American+Cultural+History&
issn=0003-1615&
date=2001&
volume=58&
issue=2&
pages=261-283&
aulast=Kapelusz-Poppi&
atitle=Rural+health+and+state+construction+in+post-revolutionary+Mexico%3a&
sid=LC:HLAS



OpenURL 0.1



=article&
title=Americas%3a+A+Quarterly+Review+of+
Inter-American+Cultural+History&
issn=0003-1615&
date=2001&
volume=58&
issue=2&
pages=261-283&
aulast=Kapelusz-Poppi&
atitle=Rural+health+and+state+construction+
in+post-revolutionary+Mexico%3a&
sid=LC:HLAS



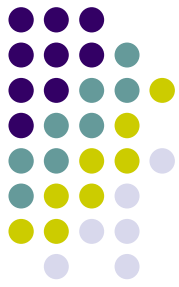
What is an OpenURL Resolver?



An OpenURL resolver is a server with software that:

- Processes OpenURLs coming from diverse OpenURL-aware sources
- Constructs outgoing requests for web services to diverse target content providers
- Builds services menus for LC user groups with “just-in-time” links to full text and other web services selected by LC

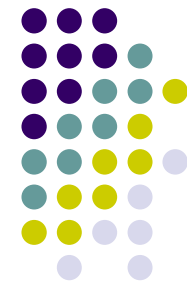
What is an OpenURL Resolver?



To successfully process incoming OpenURLs and generate outgoing requests to target service providers, a resolver must have:

- A robust knowledge database with metadata for sources, target content providers, the journal titles contained within targets, and web services
- Parsers and configuration files for:
 - matching incoming OpenURLs to knowledge database metadata
 - generating web service requests to target content providers at the appropriate level of granularity (article, journal issue, journal title, or service)

Link Sources



- A&I databases
- TOC and Abstract databases
- Full text databases
- Electronic theses and dissertations
- E-journal article references in bibliographies and footnotes
- Web pathfinder links containing OpenURLs
- OPACs

Every source must provide an **OpenURL** that can be sent to LC's resolver

Target Content Providers



- **Full Text**

- E-journals
- OPAC searches for LC print holdings
- ILL/Document delivery

- **Extended Services**

- Citation databases
- Web search engines
- Internet bookstores
- OpenURL citation generators
- Ask a Librarian

..... **LC chooses!**

No standard exists. All targets must have a defined **link-to or search syntax configured in the OpenURL resolver's knowledge database**

LC's OpenURL Resolver



Configuration will include:

- Deciding what OpenURL-aware sources and targets will be in the knowledge database
- Deciding what web services will be needed
- Building the technical infrastructure

Maintenance will include:

- Updating the knowledge database metadata (vendor/LC) at least monthly, protecting LC's local changes
- Reviewing workflow to add/update LC's journal holdings in knowledge database
- Adding/updating web services offered to users

The New NISO Standard: OpenURL 1.0



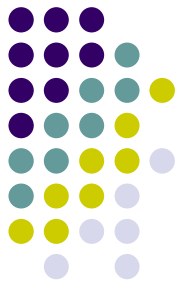
OpenURL 0.1

- Metadata values must be included in the OpenURL
- One fixed set of metadata tags and genres
- Limited contextual information about source
- HTTP transport

OpenURL 1.0

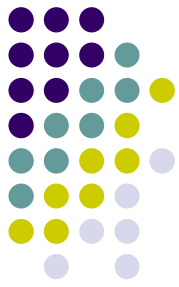
- Metadata values can be included in the OpenURL or can be pointed to
- Metadata tag sets and genres can be added
- More complete contextual information about source and desired types of service
- Transport not limited to HTTP

Challenges for OpenURLs



- Adoption of the NISO 1.0 standard in 2004
- Improving data quality for incoming OpenURLs
- Cooperatively maintaining robust knowledge databases with accurate identifiers (ISSN/ISBN) and links to web services
- Cooperatively maintaining robust parsers and configuration files
- Authentication of user groups
- Exploration of OpenURL use with non-textual genres of e-resources
- Promotion of OpenURLs within scholarly information communities and beyond

For More Information about OpenURLs



- **OpenURL Tutorial**

<http://www.ariadne.ac.uk/issue28/resolver>

- **NISO Committee AX for OpenURL 1.0**

<http://library.caltech.edu/openurl/>

- **LC's OpenURL requirements (coming soon)**

<http://lcweb.loc.gov/catdir/lcpaig>